

WHAT IS CLAIMED IS:

1. A method of manufacturing an image forming  
apparatus having an envelope made of members inclusive  
of a first substrate and a second substrate disposed at  
5 a space being set therebetween, image forming means and  
spacers disposed in the envelope, the spacers  
maintaining the space, the method comprising the steps  
of:

forming a spacer having a desired shape by cutting  
10 a spacer base member; and

abutting the spacer upon the first substrate or  
second substrate at non-cut surface of the spacer.

2. A method of manufacturing an image forming  
15 apparatus according to claim 1, wherein said step of  
forming a spacer having a desired shape forms a  
plurality of spacers having the desired shape from the  
spacer base member.

20 3. A method of manufacturing an image forming  
apparatus according to claim 1, wherein said step of  
forming a spacer having a desired shape forms a  
conductive film on an end portion of the spacer base  
member corresponding in position to abutting portion of  
25 the spacer base member upon the first substrate or  
second substrate, and cuts the spacer base member to  
form the spacer having the desired shape.

4. A method of manufacturing an image forming apparatus according to claim 1, wherein said step of forming a spacer having a desired shape forms a conductive film on surfaces of the spacer base member, and cuts the spacer base member to form the spacer having the desired shape.

5. A method of manufacturing an image forming apparatus according to claim 1, wherein said step of forming a spacer having a desired shape includes a step of forming a first conductive film on surfaces of the spacer base member, a step of forming a second conductive film on opposite end portion of the spacer base member corresponding in position to abutting portion of the spacer base member upon the first substrate or second substrate, the second conductive film having a resistance lower than a resistance of the first conductive film, and a step of cutting the spacer base member formed with the first and second conductive films to form the spacer having the desired shape.

6. A method of manufacturing an image forming apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and spacers disposed in the envelope, the spacers maintaining the space, the method comprising the steps

of:

forming a groove in a spacer base member and  
cutting the spacer base member along the groove to form  
a spacer having a desired shape; and

5        abutting the spacer upon the first substrate or  
second substrate at cut surface of the spacer.

7. A method of manufacturing an image forming  
apparatus according to claim 6, wherein said step of  
10       forming a spacer having a desired shape forms a  
plurality of spacers having the desired shape from the  
spacer base member.

8. A method of manufacturing an image forming  
15       apparatus according to claim 6, wherein said step of  
forming a spacer having a desired shape forms a  
conductive film on the groove of the spacer base  
member, and cuts the spacer base member along the  
groove to form the spacer having the desired shape.

20

9. A method of manufacturing an image forming  
apparatus according to claim 6, wherein said step of  
forming a spacer having a desired shape forms a  
conductive film on surfaces of the spacer base member  
25       formed with the groove, and cuts the spacer base member  
along the groove to form the spacer having the desired  
shape.

10. A method of manufacturing an image forming apparatus according to claim 6, wherein said step of forming a spacer having a desired shape includes a step of forming a first conductive film on surfaces of the spacer base member formed with the groove, a step of forming a second conductive film on the groove, the second conductive film having a resistance lower than a resistance of the first conductive film, and a step of cutting the spacer base member along the groove to form the spacer having the desired shape.

11. A method of manufacturing an image forming apparatus according to claim 6, wherein the groove has a tapered shape.

12. A method of manufacturing an image forming apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and spacers disposed in the envelope, the spacers maintaining the space, the method comprising the steps of:

forming a first conductive film on surfaces of a spacer base member and forming a second conductive film on an end portion of the spacer base member corresponding in position to abutting portion upon the first or second substrate, the second conductive film

having a resistance lower than a resistance of the first conductive film;

cutting the spacer base member formed with the first and second conductive films to form a spacer  
5 having a desired shape; and

abutting the spacer upon the first or second substrate.

13. A method of manufacturing an image forming  
10 apparatus having an envelope made of members inclusive of a first substrate and a second substrate disposed at a space being set therebetween, image forming means and spacers disposed in the envelope, the spacers maintaining the space and each having a conductive film  
15 at an abutting portion upon the first or second substrate, the method comprising the steps of:

immersing an end portion of a spacer base member into solution containing conductive substances to transfer the solution to the spacer base member;

20 heating the conductive substances to form the conductive film; and

abutting the end portion of the spacer base member formed with the conductive film upon the first or second substrate.

25

14. A method of manufacturing an image forming apparatus according to claim 13, further comprising the

step of forming a conductive film on surfaces of the spacer base member, the conductive film having a higher resistance than the previously-cited conductive film.

5           15. A method of manufacturing an image forming  
apparatus having an envelope made of members inclusive  
of a first substrate and a second substrate disposed at  
a space being set therebetween, image forming means and  
spacers disposed in the envelope, the spacers  
10 maintaining the space and each having a conductive film  
at an abutting portion upon the first or second  
substrate, the method comprising the steps of:

immersed an end portion of a spacer base member  
formed by heating/drawing into solution containing  
15 conductive substances to transfer the solution to the  
spacer base member;

heating the conductive substances to form the  
conductive film; and

abutting the end portion of the spacer base member  
20 formed with the conductive film upon the first or  
second substrate.

16. A method of manufacturing an image forming  
apparatus according to claim 15, further comprising the  
25 step of forming a conductive film on surfaces of the  
spacer base member, the conductive film having a higher  
resistance than the previously-cited conductive film.

17. A method of manufacturing an image forming apparatus according to any one of claims 1 to 16, wherein the first substrate is formed with electron emitting elements and the second substrate is formed with an image forming member for forming an image when electrons are applied from the electron emitting elements.

18. A method of manufacturing an image forming apparatus according to any one of claims 1 to 16, wherein the first substrate is formed with a plurality of electron emitting elements wired in a matrix form by a plurality of row and column wiring leads and the second substrate is formed with an acceleration electrode for accelerating electrons emitted from the electron emitting elements and a fluorescent member for emitting light when electrons are applied from the electron emitting elements.

19. A method of manufacturing an image forming apparatus according to claim 18, wherein the spacer is abutted upon the row or column wiring lead and upon the acceleration electrode.